CELENA

Personal Digital Assistant

YouTube Comment Classification and Sentiment Analysis

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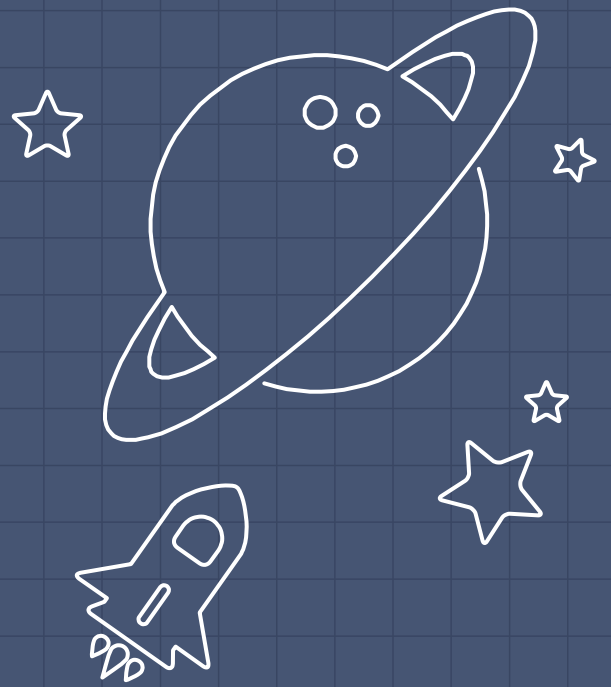
OBJECTIVE

- The objective of the project is to develop an analytical application utilizing most of the concepts learnt in this course, which can derive topic of the subject presented in any given youtube video and the Public Sentiments /Ratings for the same using public comments available on the video.

MOTIVATION

- In general, many of us have to spend time on going through the majority of the video or glance comment section to understand and realise the quality of the video, that could result in utter waste of time.
- What if we could leverage smart assistance from a device which could summarize the comments section for us in the form of Overall Public Sentiment and Topics of the video?



"CELENA – A Smart Digital Assistant."

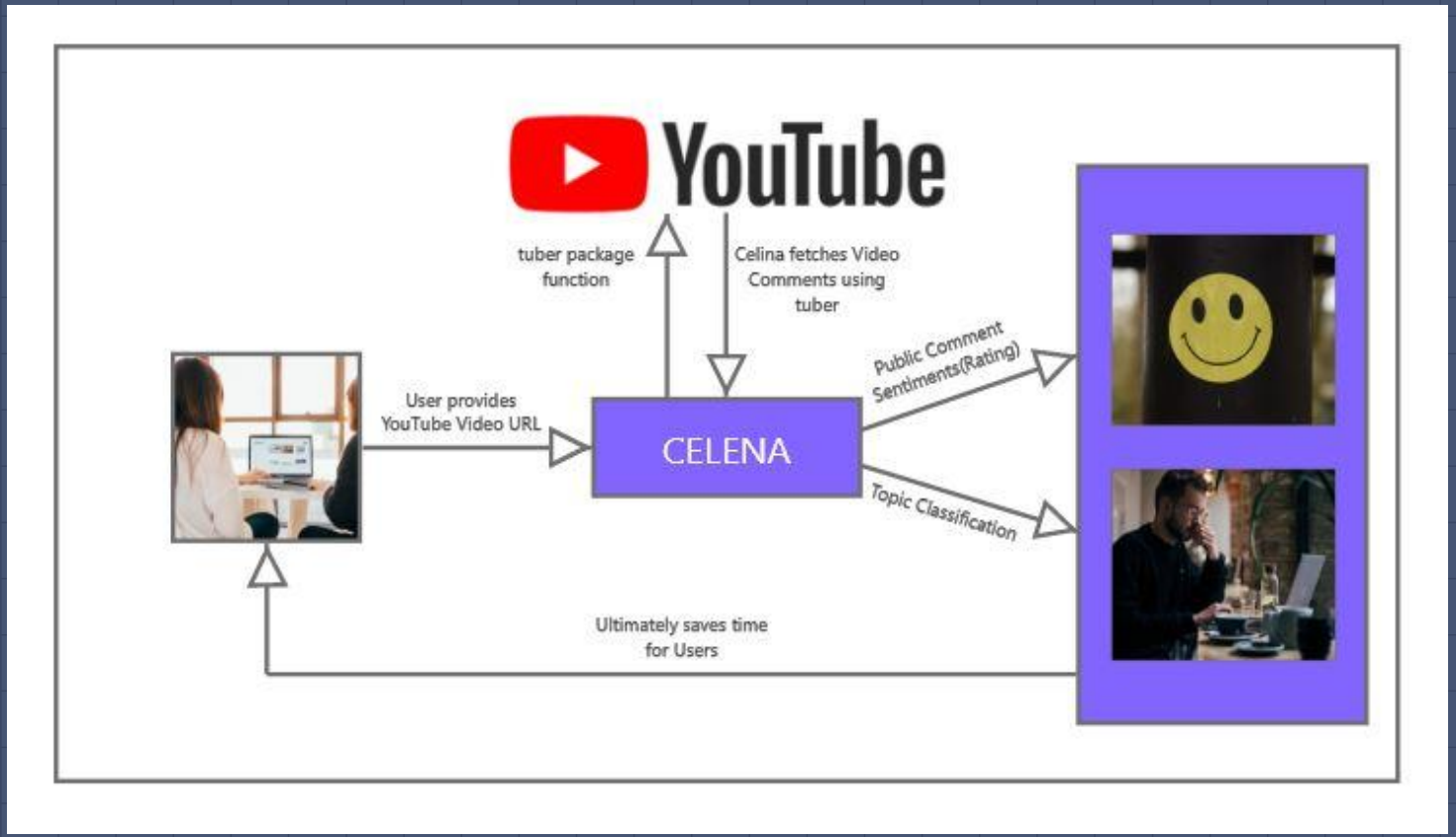
An application to get Topics and Public Sentiments using YouTube Comments.

SOLUTION

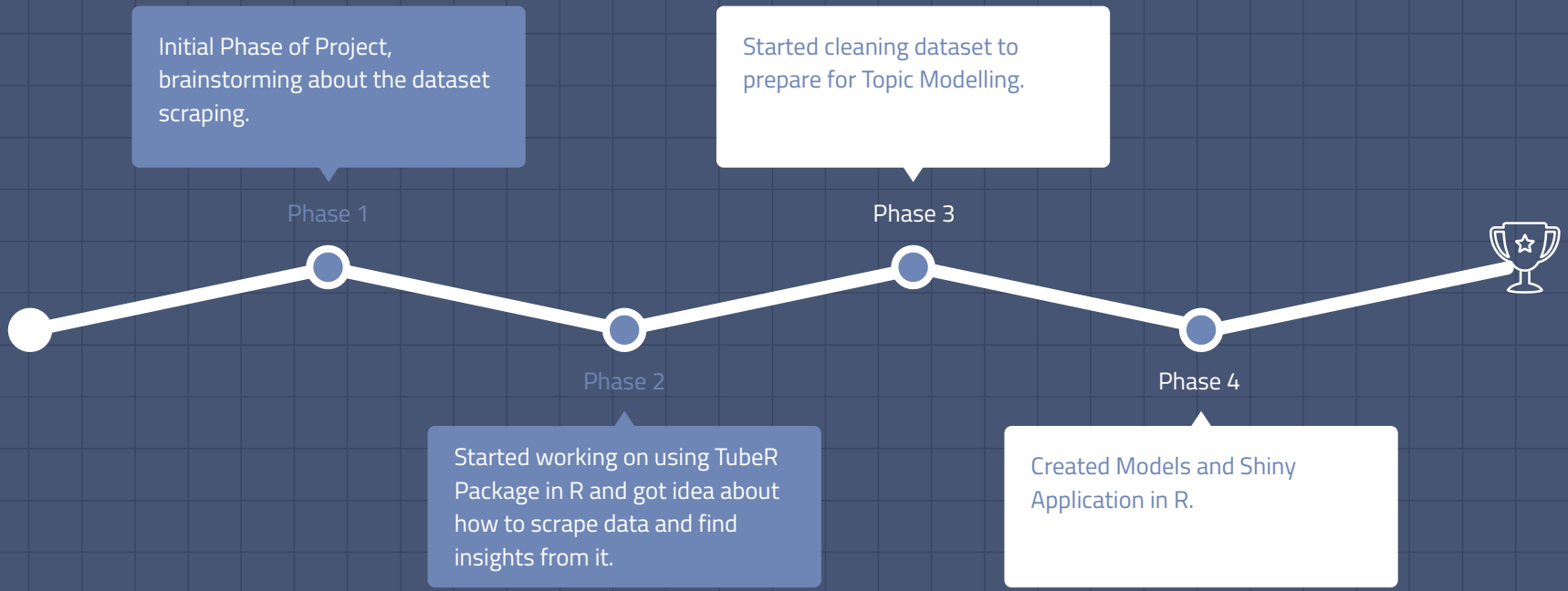
CELENA born as a younger cousin of popular digital assistant available in the market such as “ALEXA” or “SIRI”.

- User just have to provide URL of the video and CELENA will take care of the rest by applying different methods in the background to derive Ratings and Topics of the Video for the User within seconds.
- Search for a specific Topic on YouTube and get different details about the Video and classify it using the application.

DESIGN APPROACH



PROJECT PLAN



METHODOLOGY

Selenium -> tuber Package

- Accessing YouTube API via R made easier.
- Lots of functionalities to get different types of data from YouTube.
- Used Corpus, DTM, LDA methods to get to the final results.

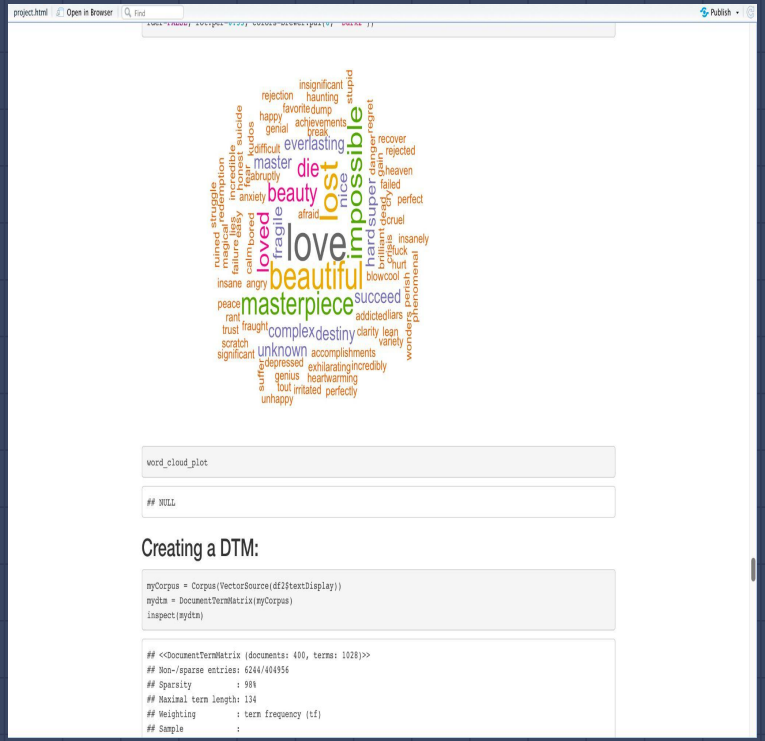
Shiny Application

3 main lines of code to run any Shiny App:

```
#ui <- fluidPage(Input(),Output())
#server <- function(input, output){}
#shinyApp(ui = ui, server = server)
```

R MARKDOWN

- Now we will explain the whole application with the help of .rmd file



DESKTOP PROJECT

- We have created a Shiny Application of our Project.

FUTURE SCOPE

- We can also work with getting replies for each comments and using it in the model.
- n-grams can be taken into consideration to make sentence more understandable.
- We can also improve the sentiments by converting emoji's to text by assigning proper meaning to that emoji.
- User experience can be improved if Celena can listen to user request and respond with voice response rather than just reading comments, that could make Celina a popular mobile and web app.

CONCLUSION

- Overall in the project, we were successfully able to apply many different concepts taught in the class and execute it.
- We also learnt a lot of new concepts while working on the project and got a glimpse of how a product development cycle works in real world industry.
- We were successfully able to do the following : text scraping, cleaning, processing and analysing data to make useful predictions.

CREDITS

Special thanks to all the people who made and released these awesome resources for free:

- Presentation template by SlidesCarnival
- Photographs by Unsplash

THANKS!

Any questions?